

Proposed SoCalGas H2 System Pipeline Permit Identification, Strategy, and Risk

System 1 (Five Points)

prepared by

D. Edwards, Inc. 3040 Saturn Street Suite 204 Brea, California 92821



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D. Edwards, Inc.

3040 Saturn Street, Suite 204 Brea, California 92821

prepared with the assistance of

Rincon Consultants, Inc.

180 North Ashwood Avenue Ventura, California 93003

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Acronyms and Abbreviations

Alameda Corridor Transportation Authority **ACTA Angeles National Forest** ANF Antelope Valley Air Quality Management District **AVAQMD** Blunt-nosed leopard lizard **BNLL** Bureau of Land Management BLM Burlington Northern Santa Fe Railroad **BNSF** California Air Resources Board **CARB** California Code of Regulations CRR **CDFW** California Department of Fish and Wildlife California Department of Transportation Caltrans **CESA** California Endangered Species Act California Energy Commission CEC CEOA California Environmental Quality Act California Fish and Game Code **CFGC CPUC** California Public Utilities Commission California's Assembly Bill 8 AB-8 Categorical Exclusion CATEX Clean Air Act CAA Clean Water Act **CWA** Coastal California Gnatcatcher **CAGN** Code of Federal Regulations CFR Conditional Use Permit CUP Council on Environmental Quality CEQ DPR Department of Parks and Recreation DOI Department of the Interior DOT Department of Transportation DWR Department of Water Resources **DRECP** Desert Energy Renewable Conservation Plan Eastern Kern County Air Pollution Control District **KCAPCD Endangered Species Act ESA**

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Environmental Impact Statement	EIS
Environmental Assessment	EA
Environmental Impact Report	EIR
Environmental Protection Agency	EPA
Federal Energy Regulatory Commission	FERC
Federal Highway Administration	FHWA
Federal Land Policy and Management Act	FLPMA
Finding of No Significant Impacts	FONSI
Fixing America's Surface Transportation	FAST
Habitat Conservation Plan	HCP
Horizontal directional drilling	HDD
Hungry Valley Native Grasslands Management Area	HGMA
Incidental Take Permit	ITP
Information for Planning and Consultation	IPaC
Interagency Operating Procedures	IOPs
Kern County Valley Floor Habitat Conservation Plan	VFHCP
Lake and Streambed Alteration Agreement	LSAA
Los Angeles	L.A.
Master Special Use Permit	MSUP
Memorandum of Understanding	MOU
Mitigated Negative Declaration	MND
Mojave Desert Air Quality Management District	MDAQMD
National Environmental Policy Act	NEPA
National Historic Preservation Act	NHPA
National Oceanic and Atmospheric Administration	NOAA
National Park Service	NPS
National Pollutant Discharge Elimination System	NPDES
Nationwide Permit	NWP
Native Plant Protection Act	
Natural Community Conservation Plan	NPPA
Natarar community conservation rian	NPPA NCCP
Natural Gas Act	
•	NCCP
Natural Gas Act	NCCP NGA

Office of the State Fire Marshall CAL FIRE

Open Space OS

Pipeline and Hazardous Materials Safety Administration PHMSA

pre-construction notification PCN

Proponent's Environmental Assessment PEA

Record of Decision ROD

Regional Water Quality Control Board RWQCB

Rights-of-Way ROW

San Bernardino Nation Forest SBNF

San Joaquin kit fox SJKF

San Joaquin Valley Air Pollution Control District SJVAPCD

Significant Ecological Area SEA

South Coast Air Quality Management District SCAQMD

Special Use Permit SUP

Species of Special Concern SSC

Standard Form SF

State Route SR

State Vehicular Recreation Areas SVRA

State Water Resources Control Board SWRCB

Stormwater Pollution Protection Plan SWPPP

Surface Transportation Board STB

Transportation Security Administration TSA

United States Army Corps of Engineers USACE

United States Fish and Wildlife Service USFWS

Water Discharge Requirements WDRs

Waters of the United States WOTUS

West Mojave Plan WMP

Western Riverside County Multiple Species Habitat

Conservation Plan WRC-MSHCP

West-wide Energy Corridor WWEC

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1 Introduction

This Hydrogen (H2) Pipeline Feasibility Study Permit Identification and Strategy Report (H2 Permit Report) has been completed for SPEC Services, Inc. (SPEC) by D. Edwards, Inc. with the assistance of Rincon Consultants, Inc. (Rincon)in support of the SoCalGas H2 Pipeline Feasibility Study. The overarching H2 Permit Report is divided into five stand-alone reports, each examining one specific Pipeline System as provided by SPEC to identify potential environmental permitting requirements and to inform a successful and efficient permitting strategy to deliver hydrogen gas for the "low," "medium," and "high" demand cases in the L.A. Basin of Southern California.

Reports will be provided for each Pipeline System below, with bold indicating the subject of this H2 Permit Report:

- System 1 Five Points (Intrastate): California's Central Valley to the L.A. Basin
- System 2 Mojave (Intrastate): California's Mojave Desert to the L.A. Basin
- System 3/System Whitewater (Intrastate): California's Northern Coachella Valley to the L.A.
 Basin
- System 4 Blythe (Intrastate): Eastern portion of Riverside County near the California border with Nevada to the L.A. Basin
- System 5 Delta (Interstate): Central Utah through Nevada to the L.A. Basin in Southern California

This H2 Permit Report provides a summary of anticipated regulatory and permitting requirements identified along the System 1 Alignment, consisting of the "Low Demand Alignment" (from near California City south through the City of Los Angeles to the Port of L.A./Port of Long Beach area [POLA/POLB]; the "Medium Demand Alignment" (including the Low Demand Alignment plus an additional alignment from Santa Clarita in Los Angeles County through the Counties of San Bernardino, Riverside, Orange, and Los Angeles to the POLA/POLB area); and the "High Demand Alignment" (the Medium Demand Alignment plus an additional alternative route east of the Low Demand Alignment from Interstate 5 (I-5) near Kettleman City to Grapevine where it meets back up with the Low Demand Alignment).

Permitting and regulatory requirements have been identified at a conceptual level considering general federal, state and local jurisdictions, regional entities, existing pipeline corridors or rights of way, other known existing rights of way, or in some cases the need for new rights of way. Environmental, land, and permitting considerations have been presented with descriptions and summaries of the conditions present. Permit risk has focused on environmental regulations that would create unavoidable constraints to permitting of that pipeline route.

1.1 Background

As of December 2020, there were 1,608 miles of hydrogen pipeline in the United States (U.S.), which nearly all occur in dedicated hydrogen infrastructure. However, some U.S. operators have initiated projects to blend hydrogen and methane in natural gas pipelines (CRS 2020). Regulatory authorities differ for dedicated hydrogen pipelines and for natural gas pipes carrying hydrogen blends.

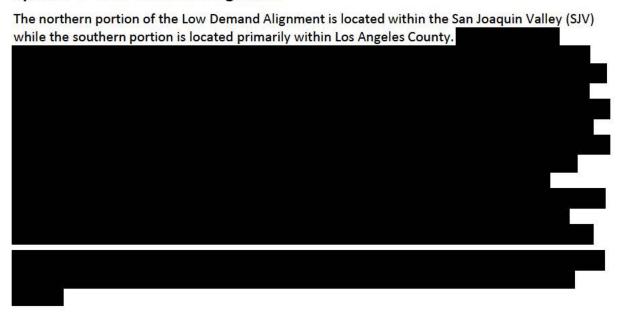
Federal pipeline jurisdiction generally resides with the Surface Transportation Board (STB) (primarily for freight-train conveyance), the Federal Energy Regulatory Commission (FERC) (natural gas pipeline interstate siting, construction, and operation), the Transportation Security Administration (TSA), and the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (DOT) (safety). However, as discussed above existing regulations applicable to natural gas do not address the specific requirements and challenges of hydrogen. While FERC has not utilized this authority to regulate pipelines exclusively transporting hydrogen, and may not have jurisdiction to do so under the NGA or other existing statutes, it is possible that FERC could regulate the transportation of hydrogen if it is transported in a blended stream with natural gas.

The Department of Energy (DOE) Hydrogen Program, led by the Hydrogen and Fuel Cell Technologies Office within the Office of Energy Efficiency and Renewable Energy, is conducting research and development into hydrogen production, delivery, infrastructure, storage, and multiple end uses. For transportation and delivery of hydrogen via pipeline, the DOE Hydrogen Program is currently rooted in the research and development phase and has not yet progressed into policy or rule-making. Similarly, state governments, regional entities, counties, and cities also lack specific permitting paths for pipeline transportation of hydrogen. As a result, the information within this H2 Permit Report is likely to change as the industry develops and agencies are prompted to provide hydrogen-specific regulation and/or guidance. Regular updates to the information provided within this H2 Permit Report is advised to accurately represent current laws, regulations, requirements and guidelines.

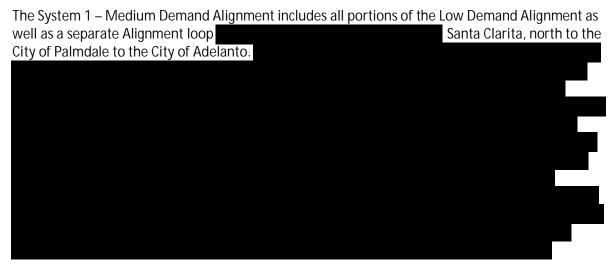
1.2 Pipeline Route Descriptions

The proposed Project includes regulatory and permitting overview of five potential pipeline alignments. This H2 Permit Report provides a summary of the System 1 – Five Points (Intrastate) Low Demand Alignment, Medium Demand Alignment, and High Demand Alignment located entirely within California. Lateral routes and distribution lines are not addressed in this Report.

System 1 – Low Demand Alignment



System 1 – Medium Demand Alignment



System 1 - High Demand Alignment

The System 1 – High Demand Alignment includes both the Low Demand Alignment and the Medium Demand Alignment, plus an additional alternative pipeline route that splits from the Low Demand Alignment in the northern portion of the City of Avenal.

2 Permit Identification

This Section provides an overview of the anticipated regulatory agencies, applicable permits and scheduling lead times associated with the System 1 -Five Points (Intrastate): California's Central Valley to the L.A. Basin.

2.1 Assumptions

The following list provides the assumptions used by Rincon during the evaluation of the proposed project's anticipated permit strategy and risks:

- As a hydrogen pipeline, it is not expected to be subject to FERC's exclusive authority under the
- The pipelines are not regulated as a public utility by the CPUC; the CPUC is not assumed to be the lead agency under CEQA.
- Where feasible, pipelines will be routed within established pipeline, transportation, or energy corridors or routes that may have been previously assessed on past projects.
- Pipelines will be constructed underground and impacts from installation will be temporary.
- Pipelines within these routes can be constructed in accordance with current regulatory specifications. Unforeseen changes in regulations often have rippling effects in multiple issue areas.
- State and local regulatory agencies may reduce or increase permit times provided in this analysis based on the hydrogen-related permitting procedures in place at the time of application submittal.
- Pipeline routes are generally designed to avoid areas that would be considered highly challenging for environmental reasons such as national parks. However, since only a cursory review of environmental permitting would made, this study cannot consider all permitting scenarios. Permitting risk for the pipelines would be considered high.
- Where possible, pipelines routes have been located within public land or city ROW, and private ROW avoided to the extent feasible. This analysis assumes the foot buffer provided can be reduced in constrained urban and regulated areas.
- The space necessary to lay pipelines is available within the existing pipeline route corridor; corridors can accommodate pipeline size and design specifications.
- Risk and hazards associated with locating multiple large diameter hydrogen pipelines operating at high pressure within the same corridor is not evaluated in this analysis.
- Pipeline operation is not anticipated to result in regulated emissions (e.g., flares) and CARB or California's local air districts (either air quality management districts [AQMDs] or Air Pollution Control Districts [APCDs] operational permits are not required).

2.2 Jurisdictions and Anticipated Permits

A primary factor in the development of utility-scale hydrogen distribution is regulation of siting, safety, and security. Regulations for hydrogen pipelines may differ depending on whether a pipeline is designed for hydrogen transmission only, or whether it is designed for blended use with natural gas or methane. Regulatory authority for the transmission of hydrogen is generally divided among federal and state agencies. Currently there is no specific federal authority to approve the siting of dedicated hydrogen pipelines, although federal approvals may be required for siting of specific pipeline segments (CRS 2021). As a result, the subsequent summary of agencies and permitting roles (Table 1) are based on current regulations and the latest information provided by agencies involved in natural gas or hazardous/flammable pipeline permitting and oversight.

State and Federally Protected Plants and Wildlife

Numerous legally protected (state and federal) plant and wildlife species have potential to occur along or near the Project Low, Medium, and High Demand alignments. The majority of protected species occur in the northern portion of the Low Demand Alignment that traverses the SJV within the Central Valley of the California that lies south of the Sacramento–San Joaquin River Delta and is drained by the San Joaquin River. Protected species potentially occurring in the western SJV include San Joaquin Kit fox (SJKF), Blunt-nosed leopard lizard (BNLL), Swainson's hawk, Giant and Tipton kangaroo rats, San Joaquin antelope squirrels, Tipton kangaroo rat, Buena Vista Lake shrew, and burrowing owl.

Anticipated species permitting processes are as follows.

- Federal Species: A federal Endangered Species Act (ESA) take permit may be required from United States Fish and Wildlife Service (USFWS) for any federally protected species. The federal ESA take permit would likely be attained per the Section 10 HCP process and/or Section 7 if there is a federal nexus for pursuing a Section 7 consultation. SoCalGas does not currently have an active Habitat Conservation Plan (HCP) or Biological Opinion in the SJV.
- State Species: An Incidental Take Permit under § 2081 of the California Fish and Game Code (CFGC) from CDFW may be required for any state protected species. CDFW cannot issue licenses or permits for incidental take of the "Fully Protected" BNLL (except through a Natural Community Conservation Plan [NCCP]). Observational records and suitable habitat for BNLL have been identified in the SJV within the Low Demand Alignment.

Local Jurisdictions

Table 1 below shows applicable county and city jurisdictions within the System 1 (Five Points) alignments.

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Table 1 Summary of County and City Jurisdictions

Fresno County ¹	Kings County ¹	Kern County ¹	Ventura County ^{1,2}		
Los Angeles County					
■ Bell	Compton	 Lakewood 	 San Fernando 		
 Burbank 	Cudahy	 Los Angeles 	 Santa Clarita 		
Carson	 Glendale 	 Long Beach 	 South Gate 		
 Cerritos 	 Huntington Park 	Lynwood	Vernon		
Medium Demand Align	ment (includes cities and	counties listed above plus	s the following)		
Los Angeles County	ment (includes cities and	Riverside County	Ve stole de		
Los Angeles County Palmdale	ment (includes cities and	Riverside County	s the following) ■ Jurupa Valley		
Los Angeles County Palmdale	ment (includes cities and	Riverside County Eastvale	Ve stole de		
Los Angeles County Palmdale San Bernardino County	*	Riverside County Eastvale Orange County	■ Jurupa Valley		
Los Angeles County Palmdale San Bernardino County Adelanto	Ontario	Riverside County Eastvale Orange County Anaheim	Jurupa ValleyLa Palma		

High Demand Alignment (includes cities and counties listed above plus the following)

Kings County

Avenal
 Shafter

Table 2 below provides anticiated processing times by agency. It is important to note that the timelines shown in Table 2 reflect a schedule beginning once an application is deemed "complete" by the agency. Work conducted prior to an application being deemed complete will add to anticipated timelines and may include seasonal surveys (particualrly in the SJV for the Low Demand Alignment), preparation of technical reports and applications, application submittal, and at least 30 days for agency completeness review. The permitting schedules may also require additional time to address agency letters of incompleteness or requests for additional information. For more detail on regulations and how they may affect the proposed Project, refer to Appendix A.

¹ The Low Demand Alignment does not cross through any city jurisdictions within Fresno, Kings, Kern, or Ventura Counties

² Project Alignment within Ventura County is entirely within the state jurisdiction within the Hungry Valley SVRA. No County permits required

Table 2 Summary of Agencies and Permitting Role

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
Federal							
NEPA	Lead federal agency variable	EIS	Lead agency variable. Required for work on federal land (USFS, BLM) and for the issuance of federal permits or if federal funding is provided (e.g., Department of Energy). Environmental Assessment (EA) may be needed for some project components if a programmatic EIS in not prepared.	6-24	Х	X	X
BLM	ROW Grant	ROW Grant Easement		12-18	Х	Х	x
Areas of Critical Environmental Concern (ACEC)	BLM ROW Grant	ROW Grant	Additional findings and protective measures are required for BLM approval within ACECs. Increased NEPA review and BLM permit timelines anticipated.	12-18	Х		
National Park Service (NPS)	National Historic Trails Association	Consultation	Consultation should be provided to the National Historic Trails Association describing potential impacts to nearby trails and allowing the Agency to submit any comments.	Variable	Х	X	X
U.S. Forest Service (USFS)	San Bernardino National Forest (SBNF) Angeles National Forest (ANF)	New Special Use Permit (SUP)	Refer to discussion of WWECs in Appendix A and Table 3 for detail. An SUP in federal lands would also trigger NEPA. A programmatic Master SUP with the ANF for SoCalGas's Operations and Maintenance Division has been in progress since 2017 and is anticipated to be approved this year. However, the Master SUP specifies that new pipelines need a stand-alone SUP. The timeline for a new SUP may be reduced since located in an existing pipeline corridor may see reduced permitting and NEPA timelines.	18-24		x	X
U.S. Fish & Wildlife Service (USFWS)	Federal Endangered Species Act (ESA)	Section 7 Consultation Biological Opinion	A federal ESA Biological Opinion may be required from USFWS for any federally protected species where a federal nexus is present (e.g., BLM, USFS lands) per ESA Section 7 if there is a federal upland nexus. Critical habitat designated for San Bernardino Merriam's kangaroo rat, CAGN, arroyo road, California condor, and least Bell's vireo occurs. A CWA Section 404 Permit is anticipated to provide a nexus for aquatic and riparian species (e.g., arroyo toad, Least Bell's vireo). California condor coverage not anticipated to be required for temporary impacts within an existing easement and adherence to best management practices.	6-9	Х	X	х
USFWS	ESA	Section 10 HCP	A federal ESA take permit may be required from USFWS for any federally protected species when a federal nexus is absent in accordance with the Section 10 process. If no programmatic or SoCalGas specific HCP is adopted, a separate ESA take permit would be required from USFWS (e.g., for BNLL, Tipton kangaroo rat, a SJKF). If within an existing transportation or pipeline corridor the project would be anticipated to qualify for an individual, low-effect Section 10 HCP, which would be categorically excluded from NEPA review.	18-24		х	х

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
U.S. Army Corps of Engineers (USACE)	Clean Water Act (CWA)	404 Permit NWP 12	A CWA Section 404 Permit is required for any impacts to waters of the U.S., including jurisdictional wetlands, that could result in the discharge of dredged or fill materials into a waterbody or wetland. NWP 12 provides coverage for the construction, maintenance, repair, and removal of pipelines and associated facilities in WOTUS, provided the activity does not result in the permanent loss of greater than ½ acre of WOTUS (refer to Appendix A for details). New NEPA is not required for NWP 12. Recent guidance excludes ephemeral drainages.	6-12	х	Х	X
State							
CEQA	Lead agency variable, to certify line-wide	EIR	Lead Agency currently undefined; may be CEC, Caltrans, CPUC or other local or state agency. The CPUC requires a Proponent's Environmental Assessment (PEA) which results in longer lead times. The CEC does not develop the EIR but a functionally equivalent document for the licensing process for thermal power plants with a net generating capacity of 50 megawatts (MW) (including all related facilities such as transmission lines, gas pipelines, water lines, access roads, etc.), the CEC develops a. The timeline is 12 months from completeness. While the CEC currently does not have regulatory authority over hydrogen pipelines, the CEC may be designated as lead agency, a similar process and document may result.	12-24	x	х	х
California Department of Parks and Recreation (State Parks)	Chino Hills State Park	SUP	Discretionary permit for new pipeline alignment through any State Park (outside existing SoCalGas easements). CEQA Responsible Agency.	12-24		X	X
State Parks Off-Highway Motor Vehicle Recreation (OHMVR) Division	Hungry Valley SVRA	SUP	State Parks is in the process of updating the Hungry Valley SVRA General Plan and EIR. Existing pipelines are acknowledged in the 1981 General Plan. An update to the 1981 General Plan in sin progress	Variable	Х	Х	Х
California Department of Transportation (Caltrans)	All state highways	ROW Encroachment / Transportation Permit	. CEQA Responsible or Lead Agency.	6-12	Х	X	х
California Energy Commission (CEC)	Lead agency for thermal over 50kw or if funding provided	TBD	Not applicable to pipelines unless appurtenant to new thermal power plants. Potential involvement if funding is provided as a demonstration project.	n/a			
California Department of Fish and Wildlife (CDFW)	CESA	CESA ITP	Required for take to state protected species and habitat. CEQA needed. Refer to Appendix A for details. Cannot be issued for Fully Protected species such as the BNLL. Avoidance of BNLL habitat is recommended. .	18-36	х	Х	х
CDFW	CESA for Fully Protected Species BNLL	NCCP Avoidance Plan	An ITP cannot be issued for a Fully Protected species. An NCCP is a major effort covering multiple species. Development and adoption in the SJV is typically 2-4 years. Based on survey results CDFW may approve a BNLL Avoidance Plan; however, there are no specified timelines and CDFW is not required to approve.	12-78	х	Х	X
CDFW	Lake/Streambed Impacts	§1600 Programmatic Short-term LSAA	Needed to affect any drainage or drainage vegetation (including drilling muds). Requires seasonal surveys. CEQA Responsible or Lead agency.	12-18	Х	Х	Х
RWQCB	Waters of the Unites States/State	Individual 401 Certification and Waste Discharge Reequipment (WDR)	Two different permit types for waters of the state (WDR) and when coterminous with federal jurisdiction (401 Certification). CEQA Responsible Agency. Project crosses the Lahontan, Los Angeles, and Santa Ana Regional Boards.	12-24	Х	х	х
Regional: County/City/Con	nmunity Plan/Special District						
Special Districts	For example: LADWP, Open Space Districts		. Board approval needed and action may trigger CEQA.	6-12	х	х	Х
Local Air District	Dust Control Plan	Clean Air Act	Project is located within multiple air districts; Refer to Appendix A. A dust control plan is required in the SJV Low Demand Alignment within the San Joaquin Valley Air Pollution Control District (SJVAPCD). Dust Control Plans may also be required by other air districts.	1-3	х	х	х

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
Regional HCPs	VFHCP WRC-MSHCP Western Riverside County Multiple Species HCP (WRC-MSHCP)	ESA Take authorization	VFHCP is under development but is not anticipated to be adopted in the near future. Not anticipated to be required since in urban areas through these HCPs. If take coverage is needed (e.g., excavation in Delhi Sands Flower loving sand fly soils) coverage available via the WRC-MSHCP via the Participating Special Entity process.	n/a			
Railroad Crossings	Alameda Corridor Transportation Authority (ACTA), Burlington Northern Santa Fe (BNSF), and Union Pacific (UP)	ROW, Encroachment potentially a SUP	. According to the UP website, applications take a minimum of 45-60 days for engineering review once design standards are met and a valuation of the encroachment property is submitted	4 -36	х	X	х
County							
Ventura, Orange, and Riverside	N/A	N/A	Orange and Riverside only in within incorporated Cities. Ventura County in Hungry Valley SVRA under the jurisdiction of State Parks.	n/a			
Kern, Kings and San Bernardino County	All unincorporated	Ministerial Director Determination	Kern County Ministerial review for intrastate or interstate pipeline (§19.08.230). San Bernardino County Ministerial review for state and federal projects (§ 85.02.050, Alternate Review Procedures). Kings County Ministerial Site Plan Review required for utility facility not regulated by the CPUC in an agricultural zone district (Article 4).	1-3	х	X	Х
Fresno	Agricultural Zone District	CUP	CUP needed for Public Utility Facilities not regulated by the CPUC.	6-12	X	х	X
Los Angeles	Agricultural and Open Space Zone District	CUP	Discretionary Action since a CUP required for pipelines Agricultural A-2 and Open Space (OS) zone District. May include protected tree permit or SEA CUP. CEQA Responsible and potential lead agency. Project is located within the	6-12	Х	X	х
Los Angeles	Protected Trees	Protected Tree Permit	Requires specific findings that avoidance is not feasible. Public utilities are exempt, exemption may not apply to hydrogen pipeline.	6-12	Х	X	Х
Los Angeles	Significant Ecological Areas (SEAs)	CUP	Biological impacts heavily scrutinized within SEAs. Additional protected tree requirements (e.g., Joshua trees).	12-18	Х	Х	Х
Primary Route Cities (Not	e Separate Land Use Authority	than the County)					
	All Cities	Protected Tree Permit	Potential for Protected Tree Permits from all city agencies with tree protection regulations. City of Los Angeles has restrictive tree removal permit requirements.	6-12	X	X	Х
	City Governments	CUP Anticipated	Utility or crude oil pipelines not specifically regulated under the Zoning Code (except in Carson). If hydrogen pipelines are not considered a "utility" or "public entity" then in the absence of an enumerated use most jurisdictions would default to requiring CUP (6-12 Months). City Government would likely be a CEQA Responsible Agency. Refer to risk table for a discussion of legislative Code or General Plan Amendments (12-36 months).	6-36	Х	X	Х

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3 Permit Risk and Strategy

3.1 Potential Lead Agencies

As discussed above, System 1 is located entirely within California. As a result, lead agencies need to be identified for permitting and CEQA/NEPA review. Note that under CEQA all project elements must be considered, so in addition to the proposed pipelines, CEQA review may require analysis of hydrogen production. Furthermore, the Demand Alignments discussed in Section 2 above may also need to be included in the CEQA/NEPA review, which would affect the NEPA federal lead agency since federal holdings are more extensive for the other segments. Any alignment included in this analysis may become the basis for the required alternatives analysis even if it is not considered further as a viable option for System 1.

Potential Federal Lead Agencies

Under the current regulatory environment there is not a clear candidate for federal lead agency for hydrogen pipeline projects under NEPA. For interstate pipelines the DOT and FERC could act as NEPA lead agencies; however, for intrastate pipelines that have no energy-related federal nexus neither DOT nor FERC has clear path to fulfil that role. Given that System 1 crosses federally managed lands sparingly, neither the BLM nor the USFS is anticipated to seek lead agency status under NEPA but are more likely to act as a cooperating agency. If no change in federal regulation of hydrogen occurs prior to submittal of permitting applications on behalf of the project, and a federal energy regulatory agency declines to serve as the lead agency, the USFS, BLM would need to coordinate on a NEPA analysis.

Potential State Lead Agencies

There has not yet been state agency assigned responsibility for the oversight of intrastate hydrogen pipelines. While the existing state regulatory structure does not address hydrogen pipelines; the CPUC regulates natural gas pipelines (General Oder 112-F), and the California Office of the State Fire Marshal (OSFM) regulates crude oil (hazardous liquid) pipelines.

Potential CEQA lead agencies tasked with energy projects include the California Energy Commission (CEC) and the CPUC. However, the CEC is generally limited to projects involving thermal power generation. Unless the proposed project included electrical generation in excess of 50MW from a thermal source, the CEC would not be a CEQA lead agency. The Metropolitan Planning Organization are often the lead agencies Regional Transportation Plans including Sustainable Community Strategies and housing; however, they are not expected to conduct CEQA review since utility scale hydrogen is not explicitly included in these documents and the project extends over Southern California Association of Governments, and the Kern, Fresno, and Kings County Council of Governments

Under current California legislation, the CPUC is responsible for utility projects. Hydrogen pipelines are not currently classified as a utility by the state or CPUC. However, if regulatory oversight under the CPUC changes to include hydrogen transmission then the CPUC would likely serve as the CEQA lead. The CPUC CEQA process requires submittal of an application for to complete the Certificate of Public Convenience and Necessity (CPCN) and the completion of a Proponent's Environmental Assessment (PEA). The CPUC requires applicants to provide extensive information in support of the

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PEA for review in compliance with the mandates of CEQA. Typically, the PEA is a stringent process but once complete, results in a more streamlined CEQA timeline.

Without clear regulatory guidance or precedent, the path to CEQA lead agency remains unclear. The CDFW, Counties, or local have a lower potential to act as CEQA lead agency. Kern County issues only ministerial permits for inter and intra state pipelines and is not likely be the CEQA lead. Neither the California Air Resources Board (CARB) or the South Coast Air Quality Management District (SCAQMD) is anticipated to take a lead agency role since pipeline operation is not anticipated to result in regulated emissions.

Without specific hydrogen regulations in effect, there is potential for long lead times associated with agency determination of CEQA lead. When more than one public agency has discretionary authority over a project and each has a substantial claim to be the CEQA Lead Agency, two agencies may meet to decide which should be the Lead Agency via mutual agreement. Generally, for private projects the lead agency is the agency "with general governmental powers" such as a city or county, as opposed to a single- or limited-purpose agency such as a school district, water district, or air pollution control district. Limited-purpose state agencies, such as the SWRCB and the CDFW typically serve as Responsible Agencies when a local government is the lead agency (State CEQA Guidelines § 15051(b)(1)). However, in the absence of hydrogen project precedents it remains to be seen whether state agencies such as CPUC and CEC are likely to enter into such an understanding.

3.2 Permit Strategy and Risk Reduction

Table 3 (below) discusses the System 1 permits with long lead times (shown in Table 2) or discretionary permits that require review and approval.

take a CESA-listed species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity. These permits are most commonly issued for construction, utility, transportation, and other infrastructure-related projects. However, CDFW cannot issue licenses or permits for their take of the "Fully Protected" species, such as the BNLL (except through a Natural Community Conservation Plan [NCCP]).

Approval of an NCCP is a major multispecies programmatic effort; development and adoption in the SJV is typically 2-4 years. Based on survey results CDFW may approve a BNLL Avoidance Plan; however there are no specified timelines associated with such an Avoidance Plan and CDFW is not required to approve.

To address long lead time permits or those with ambiguous requirements early consultation and advocacy with key staff from federal, state, and local agencies is recommended.



Permit Type/Issue	Risk	Strategy and Risk Reduction	

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Summary of Regulations, Agencies, and Permitting Role

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Federal		
National Environmental Policy Act (NEPA)	Environmental Impact Review (anticipated to be an Environmental Impact Statement (EIS), NEPA Certification and Record of Decision (ROD)	Required for any federal action, approval, or funding. The NEPA of 1969 was created to ensure federal agencies consider the environmental limpacts of their actions and decisions. Federal agencies are required to systematically assess the environmental Quality (ECQ). NEPA applies to projects where a federal agency is asked to issue a discretionary permit. NEPA requires the lead federal agency to evaluate the impacts for the proposed action. If the impacts are not significant, the agency issues a finding of No Significant Impacts (Forns), if a Lead Agency decides that there are significant effects, then an interviormental pulmact Startener (Live Decider), the Lead Agency, The Lead Agency, Forns and Significant Impacts (Forns), if a Lead Agency decides that there are significant effects, then an interviormental pulmact Startener (Live Decider), the Lead Agency, The Lead Agency solicits comments from other Government agencies and the public prior to making a decision. The LESI is certified, and a Record of Decision recorded. (40 Code of Federal Regulations (CFR) 1500 et seq.) Under the current regulatory environment there is not a clear candidate for federal lead agency for hydrogen pipeline projects under NEPA. For interstate pipelines the DOT and FERC could act as NEPA lead agencies; however, for intrastate pipelines that have no energy-related federal nexus neither DOT nor FERC has clear path to fulfill that role. Selection of a Federal Lead Agency may vary based on pipeline jurisdictions. Lead and responsible agencies may include Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), 16 separate of Transportation (DOT) (generally for interstate), and/or U.S. fish and Wildlife Service (USFWS), 16 separate of Land Agency may vary based on pipeline jurisdictions. Lead and responsible agencies and interview of the proposed action. In Contrast the Projects and an introduced proposed action on Contrast the Projects and an introduced proposed action. In the Projects of Projects and an introduced prop
Fixing America's Surface Transportation Act	n Fast-41 No permit	In 2015, the Fixing America's Surface Transportation (FAST) Act was signed into law. Title 41 of the FAST Act (FAST-41) (42 U.S.C. § 4370m) was designed to "improve the timeliness, predictability, and transparency of the Federal environmental review and authorization process for covered infrastructure projects". FAST-41 establishes new procedures that standardize interagency consultation and coordination practices and creates a new authority for agencies to issue regulations for the collection of fees to direct resources to critical functions within the interagency review process. FAST-41 codifies into law the use of a federal Permitting Dashboard to track project timelines. Project sponsor participation in FAST-41 is voluntarily and designed for use for utility-scale eligible green renewable projects. It is not anticipated that Fast-41 will provide benefit to the project since intrastate and joint document times lines are CEQA dependent.
Pipeline and Energy Regulations		Currently, regulation of hydrogen siting, commercial service, security, and safety is divided among federal agencies and the states. Federal jurisdiction resides variously with the Surface Transportation Board (STB), the Federal Energy Regulatory Commission (FERC), the Transportation Security Administration (TSA), and the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (DOT) (see below for detail) (CRS 2021).
Surface Transportation Board (STB)	NA	The STB is an independent federal agency charged with the economic regulation of various modes of surface transportation, primarily freight rail. However, since hydrogen distribution under the proposed Project is anticipated to be conducted via pipeline and not via rail, the SBT will not require a permit and is not anticipated to be a responsible agency under NEPA.
Federal Energy Regulatory Commission (FERC)	Applicability to hydrogen currently unknown. Certification and siting of interstate natural gas pipelines	The FERC is an independent federal agency composed of five President-appointed Commissioners that regulate interstate transmission of electricity, natural gas, and oil. FERC reviews applications for construction and operation of interstate natural gas pipelines under the authority of Section 7 of the Natural Gas Act. FERC review ensures that applicants certify that they will comply with Department of Transportation safety standards. FERC's approvals include terms and conditions designed to address impacts on the environmental resources including water and air quality, land use and recreation, erosion control, cultural resources, and wildlife and endangered species. For interstate natural gas pipelines, FERC is often the Federal Lead Agency under NEPA. FERC's Strategic Plan (2018 – 2022) currently includes an objective to streamline the permitting process through formal review of the Commission's 1999 Certificate Policy Statement for Natural Gas Pipelines. However, the Federal government has yet to make a determination as to how the government will regulate the construction of hydrogen infrastructure. Under current regulation, pipelines within California would not fall within FERC jurisdiction.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Pipeline and Hazardous Materials Safety Administration (PHMSA) [Department of Transportation (DOT)]	Applicability to hydrogen currently unknown. Special Permit or Waiver may be required for transport of hydrogen within natural gas pipeline infrastructure in lieu of regulatory guidance	Under the DOT, PHMSA establishes national policy, sets and enforces safety standards, and conducts research for the "safe, reliable, and environmentally sound operation" of the U.S. pipeline system (49 CFR Parts 190-199). PHMSA currently regulates approximately 700 miles of hydrogen pipelines, primarily through 49 C.F.R. Part 192.31. The majority of existing pipeline regulations are focused on the transportation and distribution of natural gas. However, due to a broad definition of "flammable gas" hydrogen has historically been included within this overarching regulatory umbrella. 40 C.F.R. §§ 173.301 and 173.302 impose general requirements on the transportation of compressed gases, including compressed hydrogen. However, while these regulations provide some guidance on the use of hydrogen, they do not provide a comprehensive regulatory framework for hydrogen transport. Several hydrogen-specific transportation regulations under C.F.R. §§ 173.230, 173.301, and 173.302 focus primarily on the design, filling, and marking of hydrogen fuel cells and not with the design, construction, or operation of pipelines. As a result, PHMSA is currently using its research and development branch to address challenges associated with hydrogen delivery through local distribution infrastructure for refueling stations and stationary power sites. As the industry develops, it is anticipated that PHMSA may introduce hydrogen-specific storage and transportation requirements. Until then, the PHMSA may issue DOT special permits or waivers to a pipeline operator to satisfy federal pipeline safety regulations if they feel compliance would not be appropriate due to unique circumstances. PHMSA may grant a Special Permit, at its discretion, if sufficient alternative safeguards to the public safety are implemented. For on-land pipelines that cross state lines the DOT PHMSA would have primary jurisdiction and oversee the minimum safety standards for the design and installation of these types of pipelines. It is anticipated that PHMSA may play a
Federal Highway Administration (FHWA) (DOT)	Right-of-Way (ROW) Use Agreements	The FHWA Division Offices and State Departments of Transportation (DOTs) Federal Highway Administration (FHWA) works with State DOTs to permit renewable energy projects within highway ROWs. State DOTs may permit pipeline as utilities that require a specific Utility Accommodation Permit (UAP) (23 CFR part 645 A) or as non-utilities requiring a ROW agreement (23 CFR part 710 R). For non-Interstate projects, FHWA may assign approval authority to the state through their 23 U.S.C. 106(c) Stewardship and Oversight Agreement.
Section 368 West-Wide Energy Corridor (WWEC) Designated Areas	Relates to USFS SUP and BLM Right of entry	Section 368 of the Energy Policy Act of 2005 directs the Secretaries of Agriculture, Commerce, Defense, Energy, and Interior to designate corridors for oil, gas, and hydrogen pipelines on federal lands in the 11 contiguous Western States to perform environmental reviews, and to incorporate the designated corridors into relevant agency land use and resource management plans. A primary goal of the Section 368 WWEC is to expedite regulatory processes for future projects in these energy corridors. Section 368 does not require that Agencies consider or approve specific projects, applications for ROWs, or other permits within designated energy corridors. Instead, agencies may use the information from siting reports associated with the corridors to inform their decision-making process in granting permits or authorizations. Under Section 368, the applicant would have to apply for a ROW authorization, and the Agencies would consider each application by applying appropriate project-specific reviews under requirements of laws and related regulations including, but not limited to, the NEPA, the Clean Water Act (CWA), the Clean Air Act (CAA), Section 7 of the Endangered Species Act (ESA), and Section 106 of the National Historic Preservation Act (NHPA), etc. The applicable federal agencies would adopt appropriate Interagency Operating Procedures (IOPs) to establish minimum requirements for management of individual energy transport projects. When evaluating a ROW application within a Section 368 energy corridor. The IOPs would assist the Agencies, project applicants, and others in evaluating applications for using the corridors by providing uniform processing and performance criteria for energy transport ROWs in the corridors.
Office of Pipeline Safety (OPS)	Pipeline safety requirements	The federal government has primary responsibility for the pipeline safety regulations for both interstate (pipelines that cross state boundaries) and intrastate pipelines (pipelines that are contained within the borders of a state) and has exclusive authority over interstate lines. Although OPS can designate a state to act as its agent in the inspection of interstate lines, OPS remains solely responsible for enforcement. That said, most states (primarily through their fire marshals) work with OPS in the oversight of the pipelines that run through their state in what OPS commonly refers to as the "federal/state partnership." Within DOT, the Pipeline and Hazardous Materials Safety Administration (PHMSA), through the OPS C.F.R. Parts 190-199.
		For additional detail on pipeline safety requirements see Office of the State Fire Marshall (CAL FIRE), below.
Federal Land and Right-of-Way (ROW) Regulation	
Bureau of Land Management (BLM) ROW Application (SF-299) [Department of the Interior (DOI)]	The Bureau of Land Management (BLM) promotes multiple-use on public lands, consistent with Title V of the Federal Land Policy and Management Act of 1976, as amended (FLPMA) (43 USC 1763), 43 CFR 2800. A BLM ROW grant is required for an oil or gas pipeline to cross federal lands under BLM's jurisdiction or the jurisdiction of two or more federal agencies (43 CFR 2881.11). It is anticipated that the BLM will schedule and participate in at least two pre-application meetings prior to accepting a ROW application for a large-scale utility project. Generally, a ROW is granted for a term appropriate for the life of the project. To manage public lands, the BLM prepares land-use plans, also known as Resource Management Plans. Resource Management Plans serve as blueprints for keeping public landscapes healthy and productive for multiple-use (See DRCEP, below). Applications for proposed ROWs over, upon, under, or through public lands, including, but not limited to energy conveying pipelines require a ROW. The processing of ROW applications must comply with BLM regulatory requirements, including those for planning, environmental, and ROW. BLM may approve the application, approve the application with modifications, or deny the application. BLM ensures that if other permits are required from other agencies, they are obtained (i.e., biological opinion, water permits, etc.). BLM also ensures that NEPA is addressed.	
		The Desert Energy Renewable Conservation Plan (DRECP) is a collaborative, interagency landscape-scale planning effort covering 22.5 million acres in seven California counties—Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. The DRECP has been developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife) to:
		 Advance federal and state natural resource conservation goals and other federal land management goals;
		 Meet the requirements of the Federal Endangered Species Act, California Endangered Species Act, Natural Community Conservation Planning Act, and FLPMA; and
		Facilitate the timely and streamlined permitting of renewable energy projects, all in the Mojave and Colorado/Sonoran desert regions of Southern California.
		The primary biological resources goals of the DRECP LUPA are landscape and habitat connectivity, ecosystem and ecological function, and species conservations.
		Through the DRECP, the BLM is adopting a variety of incentives to steer future renewable energy development to Development Focus Areas (DFAs). Under the LUPA, these incentives are applicable to solar, wind, and geothermal. Consistent with 43 CFR 1610.5(a) and 43 CFR 2804.26(a)(1), the BLM could deny renewable energy applications that do not conform to the land use plan.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
United States Forest Service (USFS)	Special Use Permit (FS-2700-4)	Section 28(w)(2) of the Mineral Leasing Act of 1920 (30 U.S.C. 185(w)(2)) requires the USFS to notify the Senate Energy and Natural Resources Committee and the House of Representatives Resources Committee when a request has been made to use National Forest System lands for oil or gas pipelines 24 inches or larger in diameter. When a proposal for an oil or gas pipeline 24 inches or larger in diameter is accepted as a formal application, the Regional Office, Director of Lands or equivalent official, shall forward a copy of the application to the Washington Office, Director of Lands, to facilitate committee review. If a decision is made to approve the project, the Regional Office, Director of Lands or equivalent official, shall forward to the Washington Office, Director of Lands, a copy of the decision notice and proposed special use authorization to forward to the appropriate committee chairperson. The authorized officer must wait 60 days before issuing the authorization unless the waiting period is waived by the committee.
National Park Service (NPS)	NPS ROW Permit (SF-299)	A ROW is a permit issued by the NPS to allow a utility to pass over, under, or through NPS property. The permit may be issued only pursuant to specific statutory authority and generally if there is no practicable alternative to the use of NPS lands, regardless of whether the equipment is serving the NPS and its visitors or crossing the park to reach other communities. A ROW permit is required for building or installation of a utility on NPS lands. (Utilities are generally defined as "canals, ditches, pipes and pipelines, flumes, tunnels, or other water conduits and water plants, dams, and reservoirs used to promote irrigation or mining or quarrying, or the manufacturing or cutting of timber or lumber, or the supplying of water for domestic, public, or any other beneficial uses.") As with other federal agencies including the BLM and BOR, Standard Form (SF) 299, "Application for Transportation and Utility Systems and Facilities on Federal Lands," is the application required for submittal. While these authorities allow activities that adversely impact NPS resources, NPS Management Policies 2006, which set forth the NPS interpretation of the Organic Act, prohibit the NPS from taking any action that would result in impairment of park resources or values. Note that the NPS does not have the general authority to issue permits for roads or oil or gas pipelines. Refer to National Park Service (NPS) National Historic Trails Association for below for a discussion of National Historic Trails.
Bureau of Reclamation (BOR)	Use Authorization (SF-299)	Project proponents proposing to develop or cross any public BOR land, facility, or water body are required to obtain a written land use authorization. The BOR will determine if the requested use is compatible with authorized project purposes, in the best interests of the public, and consistent with appropriate resources management and environmental considerations for the area. 43 CFR 429 and Reclamation Manual LND 08-01 provide guidance regarding the types of projects requiring use authorization including: "Infrastructure, such as transportation, telecommunications, utilities, and pipelines." As with the BLM, Standard Form (SF) 299, "Application for Transportation and Utility Systems and Facilities on Federal Lands" is the application required for submittal.
Railroad Crossings and the Alameda Railway Corridor	ROW Permit, Encroachment Potentially a Special Use Permit (SUP)	The southern California project region is generally served by two major rail operators, Burlington Northern Santa Fe (BNSF), and Union Pacific (UP). Both the BNSF and the UP require licensing agreements for pipeline crossings or encroachments within RR ROW. Generally, all pipelines carrying caustic, flammable, or explosive materials fall under the provisions for high-pressure gas and liquid fuel lines. According to the UP website, applications take a minimum of 45-60 days for engineering review once design standards are met, and a valuation of the encroachment property is submitted. Encroachment permits take a minimum of 6 months for engineering review plus an additional 30 days for delivery of the agreement. According to the BNSF website, agreement processing generally requires 30-60 days for agreement processing.
		The Alameda Corridor is a 20-mile freight rail "expressway" owned by the Alameda Corridor Transportation Authority (ACTA) that connects the national rail system near downtown Los Angeles, to the ports of Los Angeles and Long Beach, running below Alameda Street. The ACTA maintains over 65 miles of freight rail track, with 125 turnouts, 10 rail bridges, signals at 48 locations, seven grade crossings, and several storm water pump stations. Construction along the Alameda Corridor is on-going. Crossings and encroachments within the Alameda Corridor are less clear and procedures and permitting requirements would likely be based on the specific locations of the crossings and the proximity of the pipeline to the ROW.
Endangered Species Regulation		
U.S. Department of Interior (DOI), Fish and Wildlife Service (USFWS) National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS)	Endangered Species Act (ESA) Consultation Section 7 Informal/Formal Consultation (federal Nexus) Section 10 10(a)(1)(B) HCP (no federal nexus)	Species protected by federal law are listed as threatened or endangered and may have designated critical habitat. Any activity, such as displacement or habitat disturbance, that may affect listed or proposed Threatened and Endangered species requires consultation with either the USFWS or NOAA-NMFS. Generally, USWS manages land and freshwater species, and NOAA-NMFS is the lead agency for listed marine species (i.e., marine mammals, sea turtles, marine and anadromous fish and marine invertebrates and plants). Candidate species are not protected under the ESA but are subject to special review requirements under Section 7 of the ESA. The ESA prohibits "taking" of listed fish and wildlife species by any person and also prohibits malicious damage or destruction of listed plant species by federal actions. As defined in the ESA, to take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Where a nonfederal entity (e.g., private individual, corporation, local agency, state agency) will be conducting an activity that would result in take of wildlife or fish species listed under ESA, that entity must obtain a permit from the Services for such taking or it will be in violation of ESA.
		Determination if the project will impact protected species or habitat is based upon a literature search of the project site, a review of the project site using the USFWS IPaC planning and consultation tool and/or a site visit by a qualified biologist. The USFWS IPaC map tool provides a list of critical habitat, listed species, migratory birds or other natural resources that may be affected by the project. Similarly, NOAA Fisheries can provide a list of species in the project area.
		Critical habitat includes areas identified under Section 7 of the FESA (15 U.S.C. § 1531–1544, FESA § 3(5)(A)). Designated critical habitats are described in 50 C.F.R. Parts 17 and 226. Critical habitat consists of two types of specific areas for federally listed special-status species: (1) areas that fall within the geographic area occupied by the species at the time the species is listed in accordance with the provisions of Section 4 of the FESA, and that contain physical or biological features (constituent elements) essential to the conservation of the species and that may require special management consideration or protection; and (2) specific areas outside of the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 7 of the FESA, if the Secretary of the Department of Interior determines that such areas are essential for the conservation of the species.
		Where other federal permits are present Section 7 of the FESA requires the federal permitting entity to consult with USFWS/NMFS when the federal permit "may affect" listed species or designated critical habitat. A Biological Assessment (BA) should be submitted with the federal permit application, describing the effects on the species along with a finding as to whether the effects are "adverse." If the BA finds that the effects are not adverse ("May affect, but is not likely to adversely affect") and the USFWS/NMFS concurs, a concurrence letter is provided, and consultation is concluded. If effects are adverse ("May affect, and is likely to adversely affect"), then formal consultation is initiated and a Biological Opinion granting take coverage is typically issued. In extreme cases, the Biological Opinion may find that the project would jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat; in these instances, alternatives will need to be explored and adopted.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
		HCPs are required as part of an application for an Incidental Take Permit under Section 10 of the FESA if not within an area covered by a programmatic or other existing permit. HCPs also include Natural Communities Conservation Plans, which identify measures necessary to conserve and manage natural biological diversity within the planning area while allowing compatible and appropriate economic development, growth, and other human uses. Each HCP describes the anticipated effects of the proposed taking, how those impacts would be minimized or mitigated, and how the HCP is to be funded.
		Most moderate-scale projects can avoid take of species through seasonal or spatial restrictions of work; biologists can assist project designers in avoidance methods. If there is no federal permit, and no potential to avoid species (rare in most proposed actions), use existing HCPs if possible. If no existing HCP applies, the Applicant must prepare and file an HCP to demonstrate how impacts to species will be mitigated by long-term conservation measures. An HCP fits the DOI and USFWS categorical exclusion criteria if the effects of the HCP are minor or negligible on federally listed, proposed or candidate species and their habitats, if the effects of the HCP are minor or negligible on all other components of the human environment, including environmental values and environmental resources after implementation of the minimization and mitigation measures and if the incremental impacts of this HCP, considered together with the impacts of other past, present and reasonably foreseeable future actions not result, over time, in cumulative significant effects to the human environment. If an HCP does not fit the above criteria, the permit action cannot be categorically excluded from additional NEPA analysis (EA/EIS).
		Impacts to federally listed plant species within federal waters jurisdiction or areas with federal nexus would require take authorization from the USFWS through Section 7 of the Clean Water Act (CWA) for Project work (such as those included in a 404 permit related to the CWA). In the absence of a federal nexus take is not required for protected plants.
USFWS/BLM/NMFS	Regional Habitat Conservation Plans (HCPs) VFHCP (Kern County, see below)	Conservation areas include areas that have been identified as part of HCPs, Natural Communities Conservation Plans, or other approved local, regional, state, or federal HCPs. Regional habitat conservation planning is a proactive approach to addressing species conservation and economic growth and development over a large geographic area. Regional conservation planning can encompass many other biological objectives beyond threatened and endangered species issues, such as the conservation of wetlands, biodiversity, watersheds, and ecosystems. This form of proactive planning is in contrast to project-specific permitting that takes place reactive to proposed projects in compliance with the ESA. Refer to the State Section below where the Natural Community Conservation Plan (NCCP) is the state counterpart to the federal HCP and provides coverage to species protected under the California Endangered Species Act (CESA).
BLM	West Mojave Plan (Federal Take)	The West Mojave Plan (WMP) is "a habitat conservation plan and federal land use plan amendment that presents a strategy to conserve and protect the desert tortoise, the Mohave ground squirrel and nearly 100 other plants and animals and natural communities and provides a streamlined program for complying with the requirements of the California and federal endangered species acts". The HCP has not been completed and would require greater specificity for local governments to obtain incidental take permits under the state and federal endangered species acts. The WMP is currently only applicable on public lands managed by the BLM and does not apply to private property within the City of Lancaster or on lands under Los Angeles County jurisdiction. State take under CESA is not included in the WMP.
USFW/NOAA	Fish and Wildlife Coordination Act Review	The Fish and Wildlife Coordination Act authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with federal and state agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. The amendments enacted in 1946 require consultation with the Fish and Wildlife Service and the fish and wildlife agencies of states where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted or otherwise controlled or modified" by any agency under a federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources."
Waters Permits and Regulation		
U.S. Army Corps of Engineers (USACE) EPA	Clean Water Act (CWA)	The CWA (Title 33 USC Sections 1251 through 1376) provides guidance for restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.
USACE / RWQCB	CWA Section 401	CWA Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to Waters of the United States (WOTUS) (i.e., Section 404 Certification) must obtain a state certification that the discharge complies with other provisions of the CWA. In California, Regional Water Quality Control Boards (RWQCBs) administer the certification program.
EPA / SWRCB	CWA Section 402	CWA Section 402 establishes a permitting system for the discharge of any pollutant (except dredge or fill material) from a point source into WOTUS. all point-source discharges, including, but not limited to, construction-related stormwater discharges to surface waters, are regulated through the National Pollutant Discharge Elimination System program. Project sponsors must obtain a National Pollutant Discharge Elimination System permit from the SWRCB. Refer to the SWRCB discussion of SWPPP, below.
USACE	CWA Section 404 Certification	CWA Section 404 establishes a permit program administered by USACE for discharge of dredged or fill material into WOTUS, including wetlands. The Navigable Waters Protections Rule (NWPR) finalized a revised definition of "waters of the United States," as regulated under CWA Section 404, and became effective in June 2020. The NWPR aims to streamline the definition so that it includes simple categories of jurisdictional waters, provides clear exclusions for water features that traditionally have not been regulated, and defines terms in the regulatory text that were previously undefined in statute. The NWPR regulates the nation's navigable waters and the core tributary systems that provide perennial or intermittent flow into them. The new definition eliminated the application of a significant nexus test and relies more explicitly on surface water connectivity to determine jurisdiction. Perennial and intermittent creeks are considered WOTUS if they are hydrologically connected to other jurisdictional waters (typically a navigable water). The ephemeral drainages and Antelope Valley drainages no longer fall under USACE jurisdiction. Refer to CDFW and RWQCB discussion below for a discussion of regulation of jurisdictional features in absence of USACE regulation. Nationwide Permit (NWP) 12 (a general permit) covers the construction, maintenance, repair, and removal of utility lines and associated facilities in WOTUS, provided the activity does not result in the loss of greater than ½-acre of WOTUS for each single and complete project. There must be no change in pre-construction contours of WOTUS. Material resulting from trench excavation may be temporarily side cast
		in WOTUS for no more than three months 404 Certification Required for the construction, maintenance, repair, and removal of pipelines and associated facilities in WOTUS, provided the activity does not result in the permanent loss of greater than ½ acre of WOTUS for each single and complete project. There must be no change in pre-construction contours of WOTUS. Material resulting from trench excavation may be temporarily sidecast in WOTUS for no more than three months.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
USACE	Section 10 of the Rivers and Harbors Act, DA Permit/Authorization	Section 10 of the Rivers and Harbors Act requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the construction of any structure in or over any navigable water of the U.S. Structures or work outside the limits defined for navigable WOTUS require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable WOTUS, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. (33 U.S.C. 403.). Section 10 of the Rivers and Harbors Act requires authorization from the USACE for the construction of any structure in or over any navigable WOTUS.
USACE and the U.S. Coast Guard (USCG)	Rivers and Harbors Act Section 408 Permit	Section 9 of the Rivers and Harbors Act and Section 9 of the General Bridge Act requires a permit for the construction of bridges and causeways over certain navigable WOTUS to ensure that marine traffic is not adversely affected. Navigable waters are defined as those water bodies subject to the ebb and flow of the tide and that are utilized currently, potentially, or historically in their natural condition or by reasonable improvements as means to transport interstate or foreign commerce. Section 9 bridge permits are only required for waters that are currently or potentially navigable for commerce; general recreational boating is typically not sufficient to establish jurisdiction. Section 9 bridge permits are issued by the United States Coast Guard.
		Section 14 of the Rivers and Harbors Act requires permission for the use, including modifications or alterations, of any flood control facility built by the U.S. to ensure that the usefulness of the federal facility is not impaired. The permission for occupation or use is to be granted by "appropriate real estate instrument in accordance with existing real estate regulations." For USACE facilities, the Section 408 approval, known as a Section 408 permit, is required.
		Not applicable to System 1 since not classified as civil works and modification to a flood control facility are not required for an underground pipeline.
Cultural and Historic Resources		
BLM	Section 106 of the National Historic Preservation Act, Consultation and H-1780 Guidelines for Improving and Sustaining BLM-Tribal Relations	In accordance with the National Historic Preservation Act, Section 106 consultations are required when a project involving federal action, approval, or funding may affect properties that qualify for the National Register of Historic Places.
National Park Service (NPS) National Historic Trails Association	Consultation	Consultation should be provided to the National Historic Trails Association describing potential impacts to nearby trails and allowing the Agency to submit any comments.
Miscellaneous Resources		
U.S. Environmental Protection Agency (EPA)/California Air Resources Board (CARB)	Air Quality regulation; permits issued at state level from local air districts	Under the Greenhouse Gas Reporting Program (GHGRP), owners or operators of facilities that produce hydrogen must report emissions from hydrogen production processes and all other source categories located at the facility for which methods are defined in the rule. Owners and operators are required to collect emission data, calculate GHG emissions, and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting per the requirements of 40 CFR Part 98 Subpart P – Hydrogen Production. The EPA issues no permits in relation to hydrogen production or transport via pipeline. Permitting associated with the EPA generally has to do with construction and criteria pollutants. U.S. EPA has set National Ambient Air Quality Standards for six air pollutants, including ozone and particulate matter. These are referred to as the "criteria" pollutants. CARB has set California Ambient Air Quality Standards (CAAQS) for the same six pollutants, as well as for four additional pollutants. The CARB also identifies other air pollutants as toxic air contaminants (TACs) - pollutants that may cause serious, long-term effects, such as cancer, even at low levels. Most air toxics have no known safe levels, and some may accumulate in the body from repeated exposures. CARB has identified about 200 pollutants as air toxics, and measures continue to be adopted to reduce emissions of air toxics. Both criteria pollutants and toxic air contaminants are measured statewide to assess the adequacy of programs for cleaning the air. CARB works with local air pollution control districts to reduce air pollution from all sources. For specific air quality regulation refer to Regional Agencies and Entities below.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
State of California		
Pipeline and Energy Regulations		
California Environmental Quality Act (CEQA) Various state agencies, depends on the discretionary actions required for the project		CEQA (Res. Code §21000 et seq.) was promulgated in 1970 to (1) inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities, (2) identify the ways that environmental damage can be avoided or significantly reduced, (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible, and (4) disclose to the public the reasons why a governmental agency approved the project. CEQA is implemented through the CEQA Guidelines in CCR Title 14 Chapter 3. CEQA applies to projects undertaken by state and local agencies or private entities which require some discretionary approval. Where a project is to be carried out or approved by more than one public agency, one public agency (termed the Lead Agency) is responsible for preparing the appropriate environmental document. If a project subject to CEQA will not cause any adverse environmental impacts, a Negative Declaration (ND) is prepared. If the project may cause adverse environmental impacts, the Lead Agency must prepare a more detailed Environmental Impact Report (EIR). An EIR contains in-depth studies of potential impacts, measures to reduce or avoid those impacts, and an analysis of alternatives to the project. The CEQA process provides the opportunity for the public to review and provide input on both NDs and EIRs. It is anticipated that all pipeline routes will result in discretionary actions and potential effects necessitating an EIR. Selection of a CEQA Lead Agency may vary based on jurisdictions. Lead agencies and responsible agencies may include the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), with
		the lesser potential California Department of Fish and Wildlife (CDFW), Counties, or Metropolitan Planning Organizations. The California Air Resources Board (CARB) or the South Coast Air Quality Management District (SCAQMD) are not anticipated to take a lead agency role since pipeline operation would not result in emissions.
		1. Once the review is complete, if the impacts are determined to be acceptable, the agency issues a Negative Declaration (ND). If the lead agency determines that mitigation measures are required, then it issues a Mitigated Negative Declaration (MND). If the project may cause adverse environmental impacts, the Lead Agency must prepare a more detailed study called an Environmental Impact Report (EIR). An EIR contains in-depth studies of potential impacts, measures to reduce or avoid those impacts and an analysis of alternatives to the proposed project. The public is then given opportunity to review and provide input on NDs and EIRs. It is anticipated that all pipeline routes associated with the proposed project will result in discretionary actions that trigger the CEQA process and necessitate completion of an EIR. The EIR will be based or the most recent CEQA Guidelines when the project is initiated. For completion of an EIR, a timeline of at least 24 months is generally anticipated; however, unlike NEPA, there is no specific time frame for which CEQA must be completed, and more complex or controversial projects generally take longer as the proponent provides relevant studies and information to the Lead Agency.
		2. The CEQA Process generally consists of the following steps:
		3. Determine Lead Agency (difficult – most agencies do not want the Lead Agency role). If Lead Agency is CPUC, CPUC's Rules of Practice and Procedure Rule 2.4 (CEQA) will apply.
		4. Determine if project is exempt (Categorical Exemption [CE]) per CEQA Guidelines. (Due to the nature of the proposed Project, CE is not anticipated).
		5. Prepare Initial Study (IS) and submit to Lead Agency for Review (IS a detailed report that addresses the impacts of the project). It is important to note that in some cases, where a Project is already known to cause potential impacts, the Lead Agency will forgo the IS and opt instead to directly complete an EIR. (Skip to #7 below).
		6. If project does not result in significant impacts, a ND is prepared, and public notice is provided. (Due to the nature of the proposed Project, a ND will not be applicable).
		7. Public comment period lasts 30 days (may be extended in some circumstances for controversial projects under some circumstances).
		8. Comments addressed. If there are no further issues, Lead Agency issues a decision on the project through ND or MND (Due to the nature of the proposed Project, it is anticipated that an EIR will be required).
		9. If Lead Agency decides after the IS that there are significant impacts, then a draft Environmental Impact Report (EIR) is prepared by the Lead Agency.
		10. Notice of Completion, public notice, and public review period.
		11. Responses to the comments are reviewed and included in the final EIR that is reviewed, and a decision is then made on the project.
		It is anticipated that a Joint NEPA/CEQA document (and EIS/EIR) will be completed to address the project as a whole as it traverses both federal and state jurisdictions. See the discussion on NEPA for detail on potential Federal Lead Agencies. NEPA and CEQA are similar both in intent and in the review process. As a result, both statutes encourage a joint federal and state review for projects requiring both federal and state approvals. A joint review process, in theory, avoids redundancy, improves efficiency, and allows for interagency cooperation. However, there are several differences between NEPA and CEQA statues that may complicate the coordination between the Federal and state agencies in practice. To avoid these pitfalls, the NEPA and CEQA Handbook for Integrating Federal and State Environmental Reviews (Office of the President and California Governor's Office of Planning and Research 2014) was published to provide guidance to lead agencies to facilitate cooperation on projects that are subject to both NEPA and CEQA. The handbook provides a framework for establishing the Memorandum of Understanding (MOU) between two or more agencies entering a joint NEPA/CEQA review process. Since its publication in 2014, the MOU guidance has allowed Federal, state and local agencies to cooperate in the environmental review of projects ranging from infrastructure to renewable energy permitting. It is important to note, however, that few Joint EIS/EIR documents have been completed in the past 2 years under the revisions to the CEQ NEPA Guidelines promulgated by the Trump Administration. It has yet to be seen how lead agencies will navigate these new NEPA policy regulations, and whether joint EIR/EIS documents will continue to be completed as a comprehensive single report or whether new procedures for permitting under NEPA/CEQA will result.
California Public Utilities Commission (CPUC)	Permitting potential unknown, Potential Lead Agency under CEQA	The CPUC is the agency authorized to oversee intrastate gas pipeline facilities in California. Gas pipelines are subject to the federal requirements of Title 49 Parts 190 through 192 and administered by the Federal Office of Pipeline Safety (OPS). California is certified under 49 USC Subtitle VIII, Chapter 601, §60105 to oversee the Federal OPS requirements. CPUC guidelines generally enhance the Federal OPS requirements. General Order No. 112-F, "State of California Rules Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems," provides additional state requirements for gas pipelines. While the CPUC is responsible for implementation of the federal and state regulations and guidelines, currently no specific regulation regarding the transport of utility scale hydrogen has been drafted. Regulatory agencies at the federal level are funding programs to identify safety standards and design requirements for hydrogen pipelines, but these programs remain in the research and development phase and are not yet at a stage to inform policy. As a result, hydrogen is not currently specifically regulated as a public utility regulated by the CPUC. CPUC may act as a CEQA lead agency for pipeline routes within California, but at this time it is unknown what permitting would act as a trigger. As a lead agency, the CPUC requires Proponent's Environmental Assessment (PEA) which results in longer lead times than other agencies. The PEA requirements are outlined in the PEA Guidelines (State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V), as well as the CPUC's requirements for a Permit to Construct. Since not CPUC regulated, counties (and to a lesser extent cities) may determine that a non-utility pipeline use needs to be defined and regulated separately in their code and general plan.

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California Energy Commission (CEC)	No permit, approval, or clearance required	In accordance with California's Assembly Bill 8 (AB-8), the CEC is responsible for the administration of funds in support of the Clean Transportation Program, dedicating up to \$20 million per year to the development of hydrogen fueling stations in California. The CEC develops its funding programs in cooperation with the California Air Resources Board (CARB). AB-8 requires CEC and CARB to regularly analyze historical and projected progress for the current and future needs of the hydrogen fueling network development.
		The CEC role is as permitting agency is not currently defined for utility scale hydrogen (except where includes thermal energy over 50 kilowatt hours). Hydrogen pipelines may be regulated by the CEC if the agency provides funding allocated under AB-8.
Office of the State Fire Marshall (CAL FIRE)	No permit required. OSFM receives hydrostatic pressure test results within 30 days of the test	The California State Fire Marshal has jurisdiction for hazardous liquid pipelines. In 1987, the State Fire Marshal and PHMSA entered into a Hazardous Liquid Pipeline Safety Program Interstate Agent Agreement. The agreement divides pipeline safety between federal and state. The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) has exclusive federal authority over interstate pipeline facilities (49 USC § 60101, et seq.) while CAL FIRE - Office of the State Fire Marshal, Pipeline Safety Division has sole authority for the inspection and enforcement of federal and state regulations for intrastate pipelines within California. State and federal laws outlining the Pipeline Safety Division's authority include: Elder Pipeline Safety Act of 1981 (California Government Code §51010-51019.1); California Code of Regulations (CCR), Title 19 §2000-2075; Federal Law 49 U.S.C. §60101-60141; and Code of Federal Regulations, Title 49 Part 195. OSFM provides regulation regarding hydrotesting requirements for new construction, relocations, and replacement pipelines and provides standards for notification and results submittal.
		OSFM is also one of five state organizations involved in the Unified Program and is responsible for ensuring the implementation of the California Fire Code Hazardous Materials Management Plan/Hazardous Materials Inventory Statement (HMMP/HMIS) and the Aboveground Petroleum Storage Act program elements. The HMMP/HMIS program consolidates the administration, permits, inspections, and enforcement activities of several programs; CALFIRE administers the Hazardous Release Response Plan and Inventory (HMRRP) or Hazardous Materials Business Plan (HMBP) program.
Land and Right-of-Way (ROW) Regula	tion	
State of California Department of Parks and Recreation (DPR)	Special Use Permit (SUP)	Projects that impact a State Park must receive permission to enter the Park. If the project results in the construction of new infrastructure, an SUP may be required as well. DPR may act as a CEQA Responsible Agency under California Public Resources Code 501.5, 5003, 500, 14 CCR 4003. Any procedure for maintenance actions outside the terms of the existing ROW easements would be required to comply with all state and federal environmental laws and regulations, including CEQA review if applicable, which will be coordinated with DPR.
		SoCalGas has an agreement DPR called the Chino Hills State Park Access Plan, which facilitates the existing easement rights of SoCalGas and the duty of CHSP to protect sensitive resources and protect users of CHSP. The agreement provides for SoCalGas the right to lay, construct, maintain, operate, repair, replace, and change the size of and remove one or more pipelines, with metering, regulating and other equipment for the transportation of gas over and through, under, along, and across the specified land within their easements. In addition, the easements provide SoCalGas with certain rights to construct, operate, and maintain patrol roads along the right-of-way (ROW), with the right of reasonable ingress and egress over CHSP lands. Only activities within the SoCalGas' existing easements would be covered by this agreement.
DRP Division of Off-Highway Motor Vehicle Recreation	Right of Entry or SUP	SVRAs are OHV parks that are operated by the Off-Highway Motor Vehicle Recreation (OHMVR) Division of State Parks The OHMVR Division is mandated to ensure that SVRAs are managed for long-term environmental sustainability and to comply with applicable environmental laws, guidelines, and regulations. The OHMVR Division is required to manage SVRAs in accordance with management standards established for the OHMVR Program (PRC Sections 5090.2, 5090.35, and 5090.53). These management standards include soil conservation and resource management protocols. Laws that include the Off-Highway Motor Vehicle Act of 2003 (PRC Section 5090.01 et seq.) direct how State Parks and SVRAs must be managed and what uses are allowable. DRP prepares General Plans for their park facilities. A park general plan directs the long range development and management of a park by providing broad policy and program guidance. A California State Park must have an approved general plan before any major park facilities can be developed. The Off-Highway Motor Vehicle Recreation Act requires OHMVR Division to implement and administer the Off-Highway Motor Vehicle Recreation Program, which provides and supports sustainable, ecologically based opportunities for OHV recreation at specified areas throughout the state (PRC Section 5090 et seq.). The act states that effectively managed areas and adequate facilities for the use of OHVs and conservation and enforcement are essential for ecologically balanced recreation.
		The Hungry Valley SVRA General Plan was adopted in 1981 and is in the process of being updated (http://www.planhungryvalley.com). SoCalGas pipelines corridor identified in the 1981 General Plan.
California Department of Transportation (Caltrans)	ROW Encroachment Permit or Transportation Permit	Caltrans is responsible for the oversight of state highways, inter-city rail services, and public-use airports within California. Streets and Highways Code § 117 grants Caltrans the authority to issue permits, under Chapter 3 (commencing with § 660), for the location in the ROW of any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures. An encroachment permit must be obtained from Caltrans for all work done within a state highway ROW. Caltrans is may serve as a responsible or Lead Agency under CEQA.
California Department of Conservation (DOC)	Clearance	Clearance is required if the proposed development encroaches or impacts an existing oil or gas well, or if the project calls for the abandonment of a gas or oil well.
California Department of Water Resources (DWR)	Encroachment Permit	The California DWR manages the California aqueduct, which crosses the project pipeline near several areas. Pursuant to CCR, an encroachment permit is required for utility work in or on DWR ROW (Title 23, Division 2, Chapter 6, Article 1, § 612.6, Utility Crossings). Approval of an encroachment permit generally requires consistency with design requirements specified under § 612.70. CCR § 610.1(c), Environmental Review, requires encroachment applications to be evaluated for CEQA compliance.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
California Department of Fish and Wildlife (CDFW)	California Endangered Species Act (CESA) Incidental Take Permit (ITP) NCCP	The CESA is a state environmental law that conserves and protects plant and animal species at risk of extinction. The CDFW works with agencies, organizations, and other interested persons to study, protect, and preserve CESA-listed species and their habitats. The CDFW derives its authority from the CFGC. CESA (CFGC § 2050 et. seq.) prohibits "take" of state listed threatened, endangered or fully protected species. Take of individual listed species is defined differently on a federal or state level. Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as fully protected under the Code.
		Incidental Take Permits (ITPs) allow a permittee to take a CESA-listed species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity. These permits are most commonly issued for construction, utility, transportation, and other infrastructure-related projects. Permittees must implement species-specific minimization and avoidance measures, and fully mitigate the impacts of the project. CDFW's issuance of an ITP is considered a discretionary action as defined in Title 14 of the CCR, under CEQA. Therefore, before CDFW can issue the permit the applicant must have completed the necessary steps under CEQA.
		For species that are jointly listed under federal and state ESAs, CDFW may grant take coverage via a Section 2080.1 consistency determination rather than an ITP. For this to apply, CDFW must concur that the federal permit is stringent enough to meet the criteria for permit issuance under CESA. The process takes 30 days and is non-discretionary (no CEQA required). However, the federal permit must be final before the 2080.1 review can commence, and CDFW cannot amend or add measures to the federal permit when evaluating whether CESA standards are met.
		CFGC§ 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (§ 3511) may not be taken or possessed except under specific permit. § 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction.
		Due to the State Fully Protected status of the BNLL no state permits can be issued for take of this species in the absence of a NCCP. BNLL lives in the SJV region in expansive, arid areas with scattered vegetation. Today they inhabit non-native grassland and alkali sink scrub communities of the SJV floor marked by poorly drained, alkaline, and saline soils, mainly because remaining natural land is of this type. In the foothills of the southern SJV and Carrizo Plain, they occur in the chenopod community, which is associated with non-alkaline, sandy soils. The former range of the BNLL encompassed the floor of the SJV and Sierra foothills from Stanislaus County southward to the Tehachapi Mountains in Kern County. West of the SJV, the species occurred on the Kettleman and Carrizo Plains, and in the southeastern Cuyama Valley in the Counties of San Luis Obispo, Santa Barbara, and Ventura.
CDFW	Native Plant Protection Act (NPPA)	The CDFW also has authority to administer the NPPA (CFGC § 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under § 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant.
		Impacts to the state-listed endangered plant species are not expected to pose a constraint due to exemptions afforded under Section 2080 of California Endangered Species Act and Sections 1913(b) and (c) of the NPPA.
CDFW	Natural Community Conservation Planning (NCCP) Act	A NCCP is the state counterpart to the federal HCP. It provides a means of complying with the NCCP Act (California Fish and Game Code, §§ 2800–2835) that was enacted to encourage broad-based planning to provide for effective protection and conservation of the state's wildlife resources while continuing to allow appropriate development and growth. and securing take authorization at the state level. The NCCP Act is broader than FESA and the CESA. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land uses. To be approved by the CDFW, an NCCP must provide for the conservation of species and protection and management of natural communities in perpetuity within the area covered by permits NCCPs may be implemented that identify measures necessary to conserve and manage natural biological diversity within the planning area while allowing compatible and appropriate economic development, growth, and other human uses.
Waters		
CDFW	§1600 Lake and Streambed Alteration Agreement (LSAA)	Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. § 1600 et seq. of the CFGC (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake.
		An LSAA regulates Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. SSC do not have any special legal status except that which may be afforded by the CFGC as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.
Regional Water Quality Control Board (RWQCB)	Individual 401 Certification	The State Water Resources Control Board (SWRCB) and the local RWQCB have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the state (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The project may be covered by Pre-Certified NWP 12 when co-terminus with federal jurisdiction.
RWQCB	Waste Discharge Requirement (WDR)	The Porter-Cologne Water Quality Control Act regulates discharges that could affect the quality of waters of the state and requires that a waste discharge requirements form be obtained for discharges, including fill of wetlands that are not otherwise authorized by Section 404 or Section 402 of the Federal CWA. Application under waste discharge requirements requires filing of a report of waste discharge. See Appendix B for more detail.
		Any entity proposing to discharge a waste must file a Report of Waste Discharge with the appropriate Regional Water Quality Control Board or SWRCB. The Regional Water Quality Control Boards are responsible for implementing CWA Sections 401, 402, and 303(d). CCR Title 23, § 3855(b)(1) states that "an application for water quality certification shall be filed with the state board executive director whenever a potential discharge from a proposed activity: (A) may fall under the jurisdiction of more than one regional board." Porter-Cologne also provides for the development and periodic reviews of basin plans that designate beneficial
		uses of California's major rivers and groundwater basins and establish water quality objectives for those waters. In 2019, the SWRCB adopted its proposed State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State (Procedures). Among other provisions, the Procedures define certain "wetlands" as "waters of the State" under Porter-Cologne. The Procedures also provide a

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
		jurisdictional framework for the determination of aquatic features as "wetlands." Such wetland features under the Procedures are identified and analyzed as "aquatic resources" throughout this document. The SWRCE has published the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State", which became effective in 2020.
State Water Resources Control Board (SWRCB)	Notice of Intent (NOI) for a Stormwater Protection Plan (SWPPP)	This permit is applicable to projects that have 1 or more acres of soil disturbance by themselves or in conjunction with any common plan of development. This permit applies to both traditional and linear projects. Flow charts of how to make this determination are included in Environmental Standard 104.073/G8714. SWRCB Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ. Not discretionary and CEQA is not required.
		Some cities have adopted local ordinances regulating stormwater. If a project is in a city with a local ordinance, a Stormwater Management Plan (SWMP) may be required.
		A SWMP may also be required to accompany the Caltrans Encroachment Permit application for projects that are 1 acre or more and that encroach upon Caltrans ROW.
Department of Water Resources (DWR)	ROW Encroachment Permit (Ministerial)	ROW Encroachment Permit for aqueduct crossings
Regional Agencies and Entities		
CEQA/NEPA Lead Agency	Tribal Consultations	For proposed actions with potential impacts on Tribes, regulations implementing NEPA require an agency to consult with Tribes. Federal agencies including the BLM provide communication and notification to Tribes on behalf of projects; however, early outreach to Tribes is recommended for any construction activities that will traverse tribal lands. Depending on the Tribe, early outreach may be beneficial prior to or during the NEPA process.
South Coast Air Quality Management District (SCAQMD)	A facility survey and report will be required for any asphalt,	The SCAQMD encompasses 10,473 square miles and includes portions of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The SCAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses:
	concrete pads/foundations, and	 Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants
	buildings planned for demolition or removal.	Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons
	10-day notification	 Rule 403. Fugitive Dust: Requires the implementation of best available dust control measures during active operations capable of generating fugitive dust
	CEQA Review (Air Quality)	Rule 1166 and/or Rule 1466. Minimizes emissions from contaminated soils
	Dust Control Plan	 Rule 1403. Asbestos Emissions from Demolition/Renovation: Mandates asbestos surveying, reporting, removal, handling, disposal, labeling, and documentation. Applicable for construction work within existing facilities such as vaults, or within areas where existing pipelines are present.
San Joaquin Valley Air Pollution Control District (SJVAPCD)	A facility survey and report may be required for any asphalt, concrete pads/foundations, and buildings planned for	The SJVAPCD is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern. The SCAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses: Control Plan is required depending on air district. A dust control plan is required in the SJV Low Demand Alignment within the SJVAPCD. Rules 8021, 8031, and 8041. Fugitive Dust: Dust control will be implemented to limit the visible dust emissions to 20 percent opacity
	demolition or removal. 10-day notification CEQA Review (Air Quality) Dust Control Plan	 Rule 4002. Asbestos: Implements the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulating renovation and demolition activities and abatement of ACM.
Mojave Desert Air Quality Management District (MDAQMD)	A facility survey and report may be required for any asphalt, concrete pads/foundations, and buildings planned for demolition or removal.	The Mojave Desert Air Quality Management District is geographically the second largest of the state's 35 air districts and includes portions of Kern and San Bernardino County. The MDAQMD encompasses approximately of the project pipeline and will have primarily responsible for implementing non-discretionary duties, approving air quality permits, and reviewing the air quality sections of CEQA documents within its jurisdiction. MDAQMD Rule 403 regulates fugitive dust emissions and requires standard dust control measures on all Projects involving construction or demolition of structures. Fugitive dust emissions from grading, excavation, and loading will be subject to this rule, which prohibits visible dust with specific opacity requirements at the property line in a given time period. However, a Dust Control Plan is not required. The MDAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses:
	10-day notification	 Rule 302. Asbestos Survey Requirements. Asbestos surveys are required prior to renovation and demolition. Asbestos must be removed prior to activities that may disturb it
	CEQA Review (Air Quality)	 Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants
		Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons
		Rule 403. Fugitive Dust: Requires the implementation of BACM during active operations capable of generating fugitive dust
Management District (AVAQMD)	A facility survey and report will be required for any asphalt,	The Antelope Valley Air Quality Management District (AVAQMD) includes the northern desert portion of Los Angeles County. The District's boundaries start on the south just outside of Acton, north to the Kern County line, east to the San Bernardino County line, and west to the Quail Lake area. Approximately of project pipeline are located within the AVAQMD.
	concrete pads/foundations, and buildings planned for	The AVAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses:
	demolition or removal.	 Rule 302. Asbestos Survey Requirements. Asbestos surveys are required prior to renovation and demolition. Asbestos must be removed prior to activities that may disturb it.
	demondon of removal.	
	10-day notification	 Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Eastern Kern County Air Pollution Control District (KCAPCD)	A facility survey and report will be required for any asphalt, concrete pads/foundations, and buildings planned for demolition or removal. 10-day notification CEQA Review (Air Quality)	The Eastern Kern Air Pollution Control District (KCAPCD) boundary is that portion of Kern County which lies east of the Sierra Nevada Mountain Range and north of Rosamond to near the San Bernardino County Line. Approximately of project pipeline are located within the KCAPCD. The KCAPCD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses: Rule 302. Asbestos Survey Requirements. Asbestos surveys are required prior to renovation and demolition. Asbestos must be removed prior to activities that may disturb it. Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons Rule 403. Fugitive Dust: Requires the implementation of BACM during active operations capable of generating fugitive dust (see MDAQMD description below for detail)
Significant Ecological Areas (SEAs)	Los Angeles County SEA CUP	SEA are officially designated areas with irreplaceable biological resources. The SEA Program objective is to conserve genetic and physical diversity within Los Angeles County by designating biological resource areas that are capable of sustaining themselves into the future. The SEA Ordinance establishes the permitting, design standards, and review process for development within SEAs, balancing preservation of the county's natural biodiversity with private property rights. The SEA Program, through goals and policies of the General Plan and the SEA ordinance (Title 22 zoning regulations) help guide development within SEAs. The General Plan goals and policies are intended to ensure that privately held lands within the SEAs retain the right of reasonable use, while avoiding activities and developments that are incompatible with the ability of SEAs to thrive in the long term.
		Antelope Valley SEA. The Antelope Valley SEA extends from the Angeles National Forest to the playa lakes within Edwards Air Force Base, encompassing the whole of the two largest drainages exiting the northern slope of the San Gabriel Mountain range, and its geographical features serve as a major habitat linkage and movement corridor for all wildlife species within its vicinity. Ecologically "generalist" species have the ability to move across such vast areas and through changing habitat types. For such species, the SEA may serve as an important system for long-term inter-populational genetic exchange. For smaller or less-mobile species, or taxa which are more narrowly restricted in their habitat needs, the SEA can serve as a broad linkage zone, in which individual movement can take place during seasonal or populational dispersal. This provides essential genetic exchange within and between metapopulations. The two drainages, combined with the upland terrestrial desert-montane transect portion of the SEA, ensure linkage values and direct movement zones for all of the wildlife species present within the Los Angeles County portion of the Antelope Valley.
		San Andreas SEA. The San Andreas SEA includes several important linkages for wildlife movement. The Fault Zone connects with the Santa Clara River drainage in the Lake Hughes area, linking with this large, free-flowing watershed that extends to the Pacific Ocean in Ventura County. The foothills and grassland in the westernmost segment of the SEA are part of an important linkage between the San Gabriel Mountains and the Tehachapi Mountains. This linkage to the Tehachapi Mountains is important because it connects the southernmost extent of the Sierra Nevada Mountains with the San Gabriel Mountains and with the southern Coast Ranges. The Tehachapi Mountains are the only mountain linkage between the Transverse Ranges and the southern Coast Ranges to the Sierra Nevada Range. This largely natural area is an important topographic reference for migrating birds and bats, functioning as essential high elevation foraging grounds along their migration route. The Tehachapi Mountains further provide a valuable link for gene flow between divergent populations of many species, including plants. The SEA includes several large drainages that extend from the San Gabriel and Tehachapi Mountains to the western end of the Mojave Desert, flowing toward the Antelope Valley floor. These washes provide an important linkage for animals traveling between the mountains (all the ranges mentioned above) and the Mojave Desert. In addition, the sag ponds along the San Andreas fault zone and Amargosa Creek facilitates east-west wildlife movement through Liebre Mountain, Portal Ridge, and Ritter Ridge to Barrel Springs in the Antelope Valley near Palmdale. The frequency of valuable riparian communities along this travel route located within an otherwise arid climate, further indicates the importance of this area, which is one of the busiest natural wildlife linkages in the region.
		Santa Clara River SEA. Historically, the riparian corridor along the Santa Clara River has served as the primary east-west linkage between the Pacific coastline, coast ranges, interior ranges, high desert and southern Sierra (via the Transverse and Tehachapi range). Animals moving through the Santa Clara River at one time had unobstructed passage along the river and within its tributaries. The present configuration of the tributary drainages has reduced connectivity from the Santa Clarita Valley to the north, but the Santa Clara River remains relatively intact and open. The SEA embraces the river corridor and the linkage zones considered essential to ensuring connectivity and resource values within the historic movement zones for all of the wildlife species present.
		Santa Susana Mountains SEA. Includes several important linkages for wildlife movement. The Simi Hills and Santa Susana Mountains are part of a vast open space that fosters wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and Los Padres National Forest to the north. Dense, natural habitat associated with the majority of the SEA provides excellent opportunities for concealment and water sources while the grasslands provide an abundance of prey.
Local Ministerial (County or City)	Ministerial Permits	Local ministerial permits are those that are granted based upon determinations that the proposed project complies with established standards set forth in local plans or ordinances such and building permits, road crossing permits, franchise agreements. Ministerial permits also include those that may be required by a Planning Department where new development or introduction of a use requires staff (not decision maker) review and approval. Public Works Departments may require permits for encroachment into ROWs, grading, traffic or other ministerial actions.
Local Discretionary (County or City)	Conditional Use Permit (CUP)	Direct use project requirements are based on the end use(s), which are resource and location specific (i.e., district heating, spa/pool, aquaculture, greenhouses, etc.). Crude oil pipelines usually require a CUP. For uses or development not enumerated is the zoning/municipal code, such as a hydrogen pipelines not considered at utility by the CPUC, the County/City will often default to a discretionary CUP. Kings County is not anticipated to require a CUP since their definition of utility is broad and a allows a ministerial site plan review (Article 25).
		Generally Natural Gas pipelines regulated by the CPUC are exempt from local land use controls that are in conflict with "the paramount authority of the State." Article XI, Section 7 of the California Constitution says: "A County or City may make and enforce within its limits all local, police, sanitary and other ordinances and regulations not in conflict with general laws. If otherwise valid local legislation conflicts with state law, the local law is preempted by State law and is void as applied to the particular project." Additionally, Constitution Article XII, Section 8 states that "[a] city, county, or other public body may not regulate matters over which the Legislature grants regulatory power to the [Public Utilities] Commission." The Public Utilities Code authorizes the CPUC to "do all things, whether specifically designated in this act or in addition thereto, which, are necessary and convenient in the exercise of such power and jurisdiction" (California Public 7 Utilities Code § 701). Other Public Utilities Code provisions generally authorize the CPUC to modify facilities, secure adequate service or facilities, and operate so as to promote health and safety.
		Cities in the L.A Basin include: California City, Lancaster, Palmdale, Santa Clarita, Los Angeles, San Fernando, Burbank, Glendale, Vernon, Huntington Park, South Gate, Cudahy, Bell, Lynwood, Compton, Wilmington (from North to South).
		Kern, Los Angeles (Santa Clarita And Antelope Valley Area Plans), Fresno, and Kings County have specific standards related to alternative energy specific to wind and solar power generation but not hydrogen.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
		Approximately miles in incorporated Ventura County in entirely within the state jurisdiction within the Hungry Valley SVRA. Therefore, Ventura County review or permits are not required. Fresno County and Los Angeles County are assumed to require CUP since needed for major public utility facilities or pipelines.
County or City as applicable	Protected tree permit (ministerial or discretionary)	Protected trees are trees or tree communities that have special significance and are afforded protection by, and specifically identified in, County and City ordinances, codes, or general plans. The types of trees and specific physical characteristics that meet the local definitions vary by city and county. Protected tree permits (either ministerial or discretionary) may be required for removal, cutting, trimming, or encroachment upon root zones of protected trees. Some jurisdictions exempt utility maintenance; applicability would be the discretion of each jurisdiction.
Riverside	Western Riverside County Multiple Species Habitat Conservation Plan (WRC- MSHCP) Take Coverage	WRC-MSHCP allows the participating jurisdictions to authorize "Take" and serve as an HCP pursuant to Section 10(a)(1)(B) of FESA, as well as a provide State CESA coverage as an NCCP. It allows Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of CESA/FESA
	Wisher) take coverage	Coverage under the WRC-MSHCP is not anticipated, but if needed
		(e.g., Delhi Sands Flower loving sand fly) coverage available via the Western Riverside MSHCP via the Participating Special Entity process.
Kern County	Kern County Valley Floor Habitat Conservation Plan (VFHCP)	This HCP is being designed to address the protection of 25 federal and state threatened, endangered and candidate species including, but not limited to, the San Joaquin kit fox, BNLL, Buena Vista Lake shrew, giant kangaroo rat, Bakersfield cactus, and many other species. Significant ecologically-important undisturbed natural areas containing saltbush scrub and valley sink scrub as well as larger expanses of non-native grasslands afford important habitat to species covered under the plan. The conservation strategy is designed to conserve these important habitat areas which are largely in private ownership through a landscape-level, incentive-based approach, that will compliment several individual conservation planning efforts that are currently underway or proposed. The County of Kern intends to apply for a 30-year incidental take permit from the Service. The permit is needed to authorize the incidental take of threatened and endangered species that could occur as a result of public and private development.
		The Plan has been in development since 1989 the timeline for approval is unknown.

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